



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,252	07/02/2001	David H. Pullen	884.414US1	8162

21186 7590 10/05/2004

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. BOX 2938
MINNEAPOLIS, MN 55402

EXAMINER

HOLLINGTON, JERMELE M

ART UNIT	PAPER NUMBER
----------	--------------

2829

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/897,252

Applicant(s)

PULLEN ET AL.

Examiner

Jermele M. Hollington

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-6 and 33-45 is/are pending in the application.
- 4a) Of the above claim(s) 40-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-6 and 33-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 02/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Invention II, claims 4-6, in the reply filed on June 1, 2004 is acknowledged.

2. Claims 40-45 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on June 1, 2004. The examiner will like to note the reason for the withdrawal of claims 40-45 is due to the fact that claim 40 deals with a burn-in system comprising a fixture to electrically coupled to an IC, storing a temperature value for the IC and recording the temperature value or changing the temperature value to a new temperature value and determining whether the temperature indication matches the new temperature values. These limitations are different invention than of invention of claims 4-6.

3. Applicants are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

4. Claim 4 is objected to because of the following informalities: in the last line of the claim, the limitation "the junction temperature" should be change to --a junction temperature-- in order to avoid an insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 4-6 and 33-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuttle (6058497) in view of Schmidt et al (6717530).

Regarding claims 4 and 35 Tuttle discloses an integrated circuit (12) burn-in system (test system 10) comprising: a computer system (interrogator unit 20 see col. 4, lines 9-13) comprising a processor (data evaluation subunit 50) operating under the control of a computer program; and at least one IC (12) comprising: interface circuitry (test interface circuitry 100) to interface the IC (12) to the computer system (20). However, he does not disclose a thermal sense circuit as claimed. Schmidt et al disclose at least one IC comprising a thermal sense circuit (90), coupled to the interface circuitry (decode circuit 100), to provide a temperature indication that is proportional to the junction temperature of the IC. Further, Schmidt et al teach that the addition

of thermal sense circuit is advantageous because it used to monitor the temperature of the IC having specific functions within an electronic system to determine when the temperature exceeds a predetermined temperature threshold. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of Tuttle by adding thermal sense circuit as taught by Schmidt et al in order to monitor the temperature of the IC having specific functions within an electronic system to determine when the temperature exceeds a predetermined temperature threshold.

Regarding claims 5 and 36, Tuttle disclose the computer system (20) is to compare the temperature indication with a temperature value; wherein if the temperature indication substantially matches the temperature value, the computer system (20) is to bin the IC (12) at that temperature value; and wherein if the temperature indication is less than the temperature value, the computer system (20) is to decrement the temperature value and compare the temperature indication with the decremented temperature value.

Regarding claims 6 and 37, Tuttle discloses the IC (12) further comprises: logic circuitry (operational circuitry 130) coupled to the interface circuitry (100); and wherein the logic circuitry (130) is to be responsive to the temperature indication generated by the thermal sense circuit', wherein the logic circuit (130) is also to be responsive to a temperature value generated by the computer system (20); wherein the logic circuitry (130) is to compare the temperature indication with the temperature value; wherein if the temperature indication substantially matches the temperature value, the logic circuitry (130) is to generate a first indication to the computer system (20), and the computer system (20) is to bin the IC (12) at that temperature value; and wherein if the temperature indication is less than the temperature value, the logic

Art Unit: 2829

circuitry (130) is to generate a second indication to the computer system(20), and the computer system (20) is to decrement the temperature value and compare the temperature indication with the decremented temperature value.

Regarding claims 33 and 38, Tuttle discloses the interface circuitry (100) is to receive the temperature value from the computer system (20) and to send the temperature indication to the computer (20).

Regarding claims 34 and 39, Tuttle discloses the at least one IC (12) further comprises a storage circuit (operational circuitry 130) coupled to the interface circuitry (100) to store the temperature value.

Conclusion

The examiner will like to note that the office has no record of an IDS filed on July 2, 2001. If there was one filed, the examiner will like to request the applicants on refiling the IDS in response to this office action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ahmad et al (5457400), Rhodes (5557559), Kroll (5927854), Leung, Jr. (6157201), Fujiki et al (6218889), and Akram (6349396 & 6640323) disclose a method and apparatus for integrated circuit burn-in system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermele M. Hollington whose telephone number is (571) 272-1960. The examiner can normally be reached on M-F (9:00-4:30 EST) First Friday Off.

Art Unit: 2829

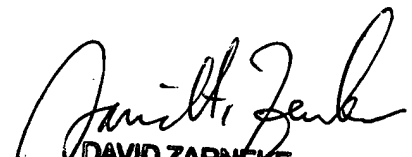
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on (517) 272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jermele M. Hollington
Examiner
Art Unit 2829


JMH

September 23, 2004


DAVID ZARNEKE
PRIMARY EXAMINER
9/25/04